

Table S4. Univariate models of selection pressure estimates on the intestinal microbiome

Microbiome variable	Drug model	Model components	Coefficient (95% CI)	p-value
Phylum Shannon diversity	Ciprofloxacin	CiproDDD AF	-0.03 (-0.04 - -0.01) 0.13 (0.04 - 0.22)	<0.001 0.004
	Cotrimoxazole	CotrimDDD Creatinin VirosDDD	-0.05 (-0.08 - -0.009) 0.02 (0.004 - 0.04) -0.02 (-0.04 - -0.002)	0.014 0.014 0.03
Species Shannon diversity	Ciprofloxacin	CiproDDD	-0.09 (-0.13 - -0.05)	<0.001
	Cotrimoxazole	CotrimDDD Leucaemia Lymphoma Creatinin VirosDDD AFDDD	-0.03 (-0.2 - 0.14) 0.58 (0.14 - 1.02) -0.78 (-1.05 - -0.51) 0.1 (0.04 - 0.15) -0.21 (-0.28 - -0.14) 0.05 (0.01 - 0.08)	0.71 0.01 <0.001 0.001 <0.001 0.004
Phylum evenness	Ciprofloxacin	CiproDDD Bilirubin VirosDDD	-0.00005 (-0.0002 - 0.00009) -0.001 (-0.003 - -0.00006) 0.004 (0.004 - 0.005)	0.48 0.04 <0.001
	Cotrimoxazole	CotrimDDD Creatinin VirosDDD	-0.0006 (-0.001 - -0.0001) 0.0002 (0.00007 - 0.0003) 0.0002 (0.00002 - 0.0004)	0.009 0.002 0.03
Species evenness	Ciprofloxacin	CiproDDD	-0.00003 (-0.0001 - 0.00005)	0.51
	Cotrimoxazole	CotrimDDD Lymphoma Creatinin	0.00007 (-0.0002 - 0.0003) -0.0009 (-0.001 - -0.0003) 0.0001 (0.00007 - 0.0002)	0.63 0.004 <0.001

95% CI, 95% confidence interval; LR, likelihood ratio test for coefficient differences; CiproDDD, cumulative dose of ciprofloxacin in defined daily doses (DDD); CotrimDDD, cumulative dose of cotrimoxazole in defined daily doses (DDD); VirosDDD, cumulative dose of antiviral agents in defined daily doses (DDD); Lymphoma, lymphoma as underlying disease; Leucaemia, leukaemia as underlying disease; AF, at least one administration of antifungals during the observation period, AFDDD, cumulative dose of antifungals in defined daily doses (DDD).

The coefficients denote the increase (positive coefficient) or decrease (negative coefficient) of the respective diversity/evenness per unit of the model component. For instance, a coefficient of -0.05 for CotrimDDD within phylum diversity means a decrease of 0.05 units Shannon diversity per cumulative DDD increase of cotrimoxazole. The p-value denotes the statistical significance of the coefficient. Contributing factors significant in the univariate model are displayed.